

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**MPM2D - Worksheet - Factoring**

1.  $x^2 + 18x + 77$

2.  $12x^2 - 20x - 32$

3.  $2x^2 + 26x + 60$

4.  $x^2 + 7x - 60$

5.  $2x^2 + 25x + 12$

6.  $3x^2 - 18x - 120$

7.  $-2x^2 - 8x + 90$

8.  $2x^2 + 9x + 7$

9.  $-5x^2 - 30x + 135$

10.  $363x^2 - 462x + 147$

11.  $1000x^2 - 810$

12.  $144x^2 - 168x + 49$

13.  $10x^2 + 105x + 270$

14.  $49x^2 + 14x + 1$

15.  $16x^2 + 40x + 25$

16.  $-60x^2 - 95x - 25$

17.  $64x^2 + 32x + 4$

18.  $x^2 - 16x + 48$

19.  $16x^2 - 169$

20.  $30x^2 + 76x - 80$

21.  $x^2 - 225$

22.  $10x^2 + 10x - 200$

23.  $-45x^2 + 240x - 320$

24.  $2x^2 - 36x + 162$

25.  $x^2 - 2x + 1$

26.  $x^2 - 4x + 4$

27.  $x^2 + 18x + 72$

28.  $4x^2 - 100$

29.  $36x^2 - 121$

30.  $1440x^2 + 2640x + 1210$

31.  $-125x^2 + 180$

32.  $-405x^2 + 5$

33.  $6x^2 + 25x + 11$

34.  $10x^2 + 37x + 7$

35.  $3x^2 + 16x + 20$

36.  $-8x^2 - 66x - 70$

37.  $81x^2 - 16$

38.  $x^2 + 9x - 22$

39.  $x^2 - 196$

**MPM2D - Worksheet - Factoring**  
**Answer Section**

- |   |                          |
|---|--------------------------|
| 1. Simple Trinomial:                      | $(x + 11)(x + 7)$        |
| 2. Common Factor, Complex Trinomial:      | $4(x + 1)(3x - 8)$       |
| 3. Common Factor, Simple Trinomial:       | $2(x + 10)(x + 3)$       |
| 4. Simple Trinomial:                      | $(x - 5)(x + 12)$        |
| 5. Complex Trinomial:                     | $(x + 12)(2x + 1)$       |
| 6. Common Factor, Simple Trinomial:       | $3(x - 10)(x + 4)$       |
| 7. Common Factor, Simple Trinomial:       | $-2(x - 5)(x + 9)$       |
| 8. Complex Trinomial:                     | $(2x + 7)(x + 1)$        |
| 9. Common Factor, Simple Trinomial:       | $-5(x + 9)(x - 3)$       |
| 10. Common Factor, Perfect Square:        | $3(11x - 7)(11x - 7)$    |
| 11. Common Factor, Difference of Squares: | $10(10x + 9)(10x - 9)$   |
| 12. Perfect Square:                       | $(12x - 7)(12x - 7)$     |
| 13. Common Factor, Complex Trinomial:     | $5(2x + 9)(x + 6)$       |
| 14. Perfect Square:                       | $(7x + 1)(7x + 1)$       |
| 15. Perfect Square:                       | $(4x + 5)(4x + 5)$       |
| 16. Common Factor, Complex Trinomial:     | $-5(4x + 5)(3x + 1)$     |
| 17. Common Factor, Perfect Square:        | $4(4x + 1)(4x + 1)$      |
| 18. Simple Trinomial:                     | $(x - 12)(x - 4)$        |
| 19. Difference of Squares:                | $(4x + 13)(4x - 13)$     |
| 20. Common Factor, Complex Trinomial:     | $2(3x + 10)(5x - 4)$     |
| 21. Difference of Squares:                | $(x - 15)(x + 15)$       |
| 22. Common Factor, Simple Trinomial:      | $10(x - 4)(x + 5)$       |
| 23. Common Factor, Perfect Square:        | $-5(3x - 8)(3x - 8)$     |
| 24. Common Factor, Perfect Square:        | $2(x - 9)(x - 9)$        |
| 25. Perfect Square:                       | $(x - 1)(x - 1)$         |
| 26. Perfect Square:                       | $(x - 2)(x - 2)$         |
| 27. Simple Trinomial:                     | $(x + 6)(x + 12)$        |
| 28. Common Factor, Difference of Squares: | $4(x + 5)(x - 5)$        |
| 29. Difference of Squares:                | $(6x - 11)(6x + 11)$     |
| 30. Common Factor, Perfect Square:        | $10(12x + 11)(12x + 11)$ |
| 31. Common Factor, Difference of Squares: | $-5(5x + 6)(5x - 6)$     |
| 32. Common Factor, Difference of Squares: | $-5(9x + 1)(9x - 1)$     |
| 33. Complex Trinomial:                    | $(3x + 11)(2x + 1)$      |
| 34. Complex Trinomial:                    | $(5x + 1)(2x + 7)$       |
| 35. Complex Trinomial:                    | $(3x + 10)(x + 2)$       |
| 36. Common Factor, Complex Trinomial:     | $-2(4x + 5)(x + 7)$      |
| 37. Difference of Squares:                | $(9x - 4)(9x + 4)$       |
| 38. Simple Trinomial:                     | $(x + 11)(x - 2)$        |
| 39. Difference of Squares:                | $(x + 14)(x - 14)$       |

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**MPM2D - Worksheet - Factoring**

1.  $-5x^2 + 80$
2.  $490x^2 + 560x + 160$
3.  $-250x^2 - 300x - 90$
4.  $-5x^2 + 85x - 350$
5.  $250x^2 - 800x + 640$
6.  $5x^2 + 46x + 9$
7.  $-x^2 + 17x - 72$
8.  $121x^2 - 44x + 4$
9.  $169x^2 - 25$
10.  $5x^2 - 180$
11.  $1210x^2 - 2200x + 1000$
12.  $3x^2 + 38x + 24$
13.  $-3x^2 + 38x - 24$
14.  $36x^2 + 84x + 49$
15.  $-3x^2 - 39x - 36$
16.  $-3x^2 + 26x - 35$
17.  $x^2 - 3x - 10$
18.  $144x^2 - 120x + 25$
19.  $169x^2 - 144$
20.  $x^2 - 21x + 110$
21.  $121x^2 - 144$
22.  $225x^2 - 4$
23.  $x^2 - 17x + 66$
24.  $640x^2 - 10$
25.  $20x^2 + 13x + 2$
26.  $5x^2 + 42x + 16$
27.  $121x^2 - 16$
28.  $-45x^2 + 125$
29.  $-100x^2 - 390x + 270$
30.  $-5x^2 + 40x - 60$
31.  $x^2 - 13x + 30$
32.  $6x^2 + 33x + 42$
33.  $121x^2 - 264x + 144$
34.  $2x^2 + 13x + 6$
35.  $x^2 + 9x - 36$
36.  $-250x^2 + 1210$
37.  $-500x^2 - 900x - 405$
38.  $4x^2 - 12x + 9$
39.  $-50x^2 + 370x - 140$

**MPM2D - Worksheet - Factoring**  
**Answer Section**

- |   |                          |
|---|--------------------------|
| 1. Common Factor, Difference of Squares:  | $-5(x + 4)(x - 4)$       |
| 2. Common Factor, Perfect Square:         | $10(7x + 4)(7x + 4)$     |
| 3. Common Factor, Perfect Square:         | $-10(5x + 3)(5x + 3)$    |
| 4. Common Factor, Simple Trinomial:       | $-5(x - 10)(x - 7)$      |
| 5. Common Factor, Perfect Square:         | $10(5x - 8)(5x - 8)$     |
| 6. Complex Trinomial:                     | $(x + 9)(5x + 1)$        |
| 7. Common Factor, Simple Trinomial:       | $-(x - 8)(x - 9)$        |
| 8. Perfect Square:                        | $(11x - 2)(11x - 2)$     |
| 9. Difference of Squares:                 | $(13x + 5)(13x - 5)$     |
| 10. Common Factor, Simple Trinomial:      | $5(x - 6)(x + 6)$        |
| 11. Common Factor, Perfect Square:        | $10(11x - 10)(11x - 10)$ |
| 12. Complex Trinomial:                    | $(3x + 2)(x + 12)$       |
| 13. Common Factor, Complex Trinomial:     | $-(x - 12)(3x - 2)$      |
| 14. Perfect Square:                       | $(6x + 7)(6x + 7)$       |
| 15. Common Factor, Simple Trinomial:      | $-3(x + 12)(x + 1)$      |
| 16. Common Factor, Complex Trinomial:     | $-(x - 7)(3x - 5)$       |
| 17. Simple Trinomial:                     | $(x + 2)(x - 5)$         |
| 18. Perfect Square:                       | $(12x - 5)(12x - 5)$     |
| 19. Difference of Squares:                | $(13x - 12)(13x + 12)$   |
| 20. Simple Trinomial:                     | $(x - 10)(x - 11)$       |
| 21. Difference of Squares:                | $(11x + 12)(11x - 12)$   |
| 22. Difference of Squares:                | $(15x - 2)(15x + 2)$     |
| 23. Simple Trinomial:                     | $(x - 11)(x - 6)$        |
| 24. Common Factor, Difference of Squares: | $10(8x + 1)(8x - 1)$     |
| 25. Complex Trinomial:                    | $(4x + 1)(5x + 2)$       |
| 26. Complex Trinomial:                    | $(x + 8)(5x + 2)$        |
| 27. Difference of Squares:                | $(11x - 4)(11x + 4)$     |
| 28. Common Factor, Difference of Squares: | $-5(3x + 5)(3x - 5)$     |
| 29. Common Factor, Complex Trinomial:     | $-10(2x + 9)(5x - 3)$    |
| 30. Common Factor, Simple Trinomial:      | $-5(x - 6)(x - 2)$       |
| 31. Simple Trinomial:                     | $(x - 3)(x - 10)$        |
| 32. Common Factor, Complex Trinomial:     | $3(2x + 7)(x + 2)$       |
| 33. Perfect Square:                       | $(11x - 12)(11x - 12)$   |
| 34. Complex Trinomial:                    | $(x + 6)(2x + 1)$        |
| 35. Simple Trinomial:                     | $(x + 12)(x - 3)$        |
| 36. Common Factor, Difference of Squares: | $-10(5x + 11)(5x - 11)$  |
| 37. Common Factor, Perfect Square:        | $-5(10x + 9)(10x + 9)$   |
| 38. Perfect Square:                       | $(2x - 3)(2x - 3)$       |
| 39. Common Factor, Complex Trinomial:     | $-10(5x - 2)(x - 7)$     |